

The logo features a central white circle with a human silhouette. Surrounding it are six smaller circles connected by a white line: a cross, a heart, a brain with gears, a pill, a clipboard, and a water drop.

**SAMHSA-HRSA**  
CENTER for INTEGRATED  
HEALTH SOLUTIONS

**Implementing Pain Management  
Guidelines In Integrated Care  
Settings  
Innovation Community**

  [integration.samhsa.gov](http://integration.samhsa.gov)

## Setting the Stage: Today's Moderator



Madhana Pandian  
Senior Associate

SAMHSA-HRSA Center for Integrated Health Solutions

[integration.samhsa.gov](http://integration.samhsa.gov)

**Slides for today's webinar will be available  
on the CIHS website:**

[www.integration.samhsa.gov](http://www.integration.samhsa.gov)

Under About Us/  
Innovation Communities 2018

integration.samhsa.gov

## To participate

Use the chat box to  
communicate with  
other attendees



integration.samhsa.gov

**Disclaimer:** The views, opinions, and content expressed in this presentation do not necessarily reflect the views, opinions, or policies of the Center for Mental Health Services (CMHS), the Substance Abuse and Mental Health Services Administration (SAMHSA), the Health Resources and Services Administration (HRSA), or the U.S. Department of Health and Human Services (HHS).

[integration.samhsa.gov](http://integration.samhsa.gov)

## Setting the Stage: Today's Presenter



Roger Chou, MD  
Professor of Medicine  
Oregon Health & Science University  
Director, Pacific Northwest Evidence-based Practice Center

[integration.samhsa.gov](http://integration.samhsa.gov)



# Opioids for Pain

## *Understanding and Mitigating Risks*

Roger Chou, MD

Professor of Medicine

Oregon Health & Science University

Director, Pacific Northwest Evidence-based Practice Center



7

## Roger Chou, MD Disclosure

- Dr. Chou has received funding from the Centers for Disease Control Prevention and the Agency for Healthcare Research and Quality to conduct systematic reviews on opioid- and pain-related topics



8

## Educational Objectives

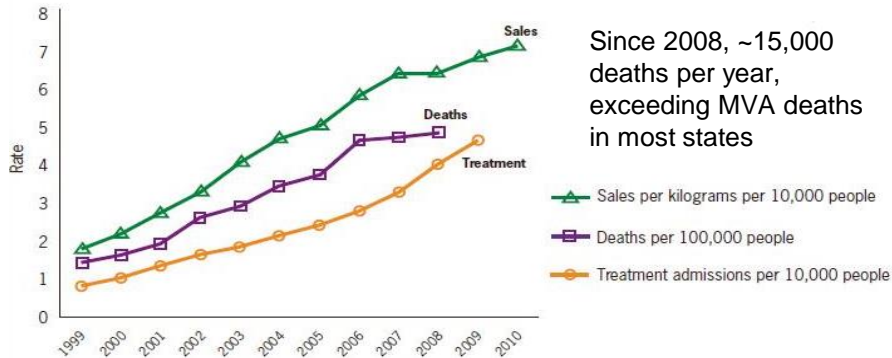
- Describe risk factors for opioid misuse, OUD, and overdose in patients with chronic pain
- Explain methods for screening and assessment for problematic opioid use
- Explain methods for monitoring and evaluating patients prescribed opioids for chronic pain to mitigate risks
- Describe non-opioid treatment approaches for chronic pain

## Background

- Chronic non-cancer pain highly prevalent, with substantial burdens
  - Chronic pain: >3 months
  - Reported by up to 1/3 of adults
- Opioids commonly prescribed for chronic pain
  - 5% of U.S. adults on long-term opioids
  - U.S. ~5% of world's population, use 80% of world's opioids (99% of hydrocodone)
  - MED per capita: US 62, UK 23, Japan 2
  - Prescribed at higher doses, more schedule II
- Opioids: Potential harms to patients as well as to society

\*Boudreau et al Pharmacoeconom Drug Saf 2009; [International Narcotics Control Board Report 2008](#). United Nations Pubns. 2009. p. 20; Caudill-Slosberg MA. Pain 2004;109:514; Sullivan MD 2008;138:440; Campbell CI Am J Pub Health 2010;100:2541

## Rates of prescription painkiller sales, deaths and substance abuse treatment admissions (1999-2010)



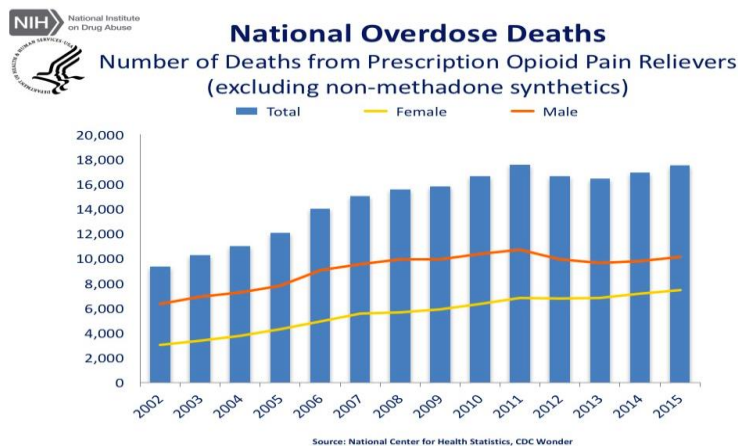
SOURCES: National Vital Statistics System, 1999-2008; Automation of Reports and Consolidated Orders System (ARCOS) of the Drug Enforcement Administration (DEA), 1999-2010; Treatment Episode Data Set, 1999-2009

Slide courtesy Mark Sullivan



11

## Risk of prescription opioid overdose

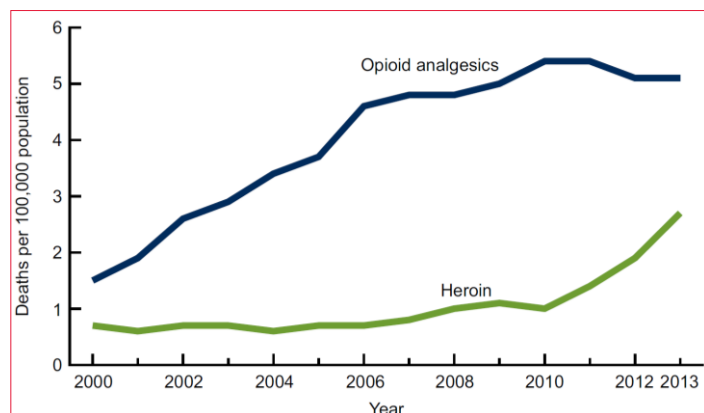


Rates are per 100,000 population age-adjusted to 2008 U.S. standard population  
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6043a4.htm>



12

## Opioid Overdose Trends, 2000-2013

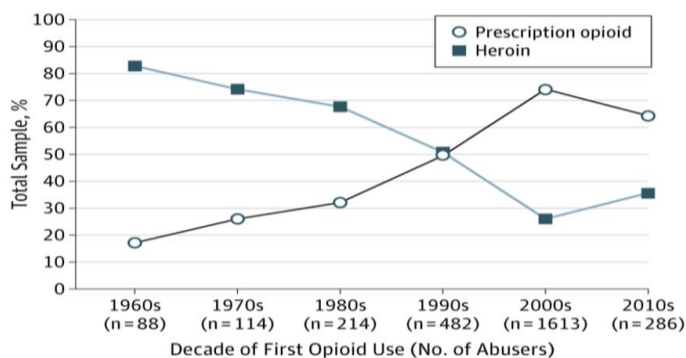


Source: CDC/NCHS National Vital Statistics System NCHS Data Brief, No. 190, March 2015



13

## First Opioid of Abuse in Those Using Heroin



Cicero TJ et al. JAMA Psychiatry 2014



14

## Opioid Pharmacology

- **Opioid mu-receptors mediate analgesic effects and AE's**
  - Structure: Natural, synthetic, semisynthetic
  - Action: Agonist, partial agonist, antagonist
  - Half-life: 2-4 hours for most, up to 15-60 hours
- **Ongoing exposure: tolerance and physical dependence**
  - Tolerance: Higher dose needed to achieve same effects (analgesic and AE's)
  - Individual variability in development of tolerance
  - Physical dependence: withdrawal when stopped
  - Tolerance and physical dependence  $\neq$  addiction (defined by behaviors)
    - **No theoretical dose ceiling**

Pathan H. Br J Pain 2012;6:11-16



15

## Opioid Misuse in Primary Care

- Likely under-recognized/under-diagnosed
- Published rates of prescription opioid misuse range from 4% to 26%
  - One study (n=801) based on 2 hr standardized interviews<sup>a</sup>
    - 26% purposeful oversedation
    - 39% increased dose without prescription
    - 8% obtained extra opioids from other doctors
    - 18% used for purposes other than pain
    - 20% drinking alcohol to relieve pain
    - 12% hoarded pain medications
- Definitions inconsistent across studies and behaviors evaluated vary in seriousness
- Poorly standardized methods to detect these outcomes
- Data from efficacy trials underestimate risks

<sup>a</sup>Fleming et al. J Pain 2007



16



## Factors Associated With Opioid Overdose

- Aberrant behaviors
  - Extra doses, unauthorized dose escalation, lost prescriptions, after-hours refill requests, obtaining opioids from multiple prescribers, using unprescribed opioids or other medications/substances, use to treat non-pain symptoms
- Recent initiation of opioids
- Methadone
- Concomitant use of benzodiazepines
- Substance use disorder
- Psychological comorbidities
- Higher opioid doses

## Universal Precautions In Pain Medicine

### Why utilize universal precautions?

- Predicting opioid misuse is imprecise
  - Protects all patients
  - Protects the public and community health
- Consistent application of precautions
  - Takes pressure off provider
  - Reduces stigmatization of individual patients and bias in management
  - Standardizes systems of care
- Consistent with clinical practice guidelines
- Universal precautions provide a standardized approach while allowing for individualized assessment and management decisions

## Common Universal Precautions

- Comprehensive pain assessment including opioid risk assessment
- Formulation of pain diagnosis/es
- Initial opioid prescription should be considered a test or trial; continue or discontinue based on ongoing reassessment of risks and benefits
  - Decision to continue or discontinue opioid therapy should be made regularly (e.g., every 2-3 months)
- Regular face-to-face visits
- Clear documentation

Chou R et al. J Pain 2009;10:147-59  
 Franklin GM et al. Neurology 2014;83:1277-84.  
 Gourlay DL et al. Pain Med 2005;6:107-12



19

## Mitigating Risks Associated with Opioids

- Careful patient assessment and selection
- Medication agreements
- Avoid higher doses
- Monitoring, including urine drug testing
- Review prescription drug monitoring data
- Avoid sedative-hypnotics (particularly benzodiazepines)
- Addiction, pain, or psychiatric consultation
- More frequent refills with smaller quantities
- Abuse-deterrent formulations
- Naloxone co-prescription

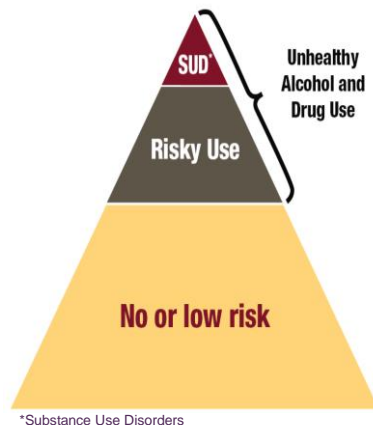


20

## Patient Selection and Risk Stratification

- Risk assessment in all patients prior to initiating opioids
- Aberrant drug-related behaviors in up to 50% of patients prescribed opioids for chronic pain
  - Strongest predictor personal or family history of alcohol or drug abuse
  - Psychological comorbidities also a factor
- Only consider opioids in patients in whom benefits likely outweigh risks
  - Opioids are not always appropriate
- Tools for risk stratification available

## Screening for Unhealthy Substance Use



### Alcohol

"Do you sometimes drink beer, wine or other alcoholic beverages?"

"How many times in the past year have you had 5 (4 for women) or more drinks in a day?"

(positive: > never)

### Drugs

"How many times in the past year have you used an illegal drug or used a prescription medication for non-medical reasons?"

(positive: > never)

# Opioid Misuse Risk Screening Tools

- ORT: Opioid Risk Tool
- SOAPP: Screening & Opioid Assessment for Patients with Pain
- COMM: Chronic Opioid Misuse Measure
- STAR: Screening Tool for Addiction Risk
- SISAP: Screening Instrument for Substance Abuse Potential
- PDUQ: Prescription Drug Use Questionnaire
- No “gold standard”
- Lack rigorous testing



23

## Administration

- On initial visit
- Prior to opioid therapy
- Predicts misuse behaviors if prescribed opioids

## Scoring

- 0-3: low risk (6%)
- 4-7: moderate risk (28%)
- > 8: high risk (> 90%)

## Opioid Risk Tool (ORT)

Mark each box that applies	Female	Male
<b>1. Family history of substance abuse</b>		
Alcohol	<input type="checkbox"/> 1	<input type="checkbox"/> 3
Illegal drugs	<input type="checkbox"/> 2	<input type="checkbox"/> 3
Prescription drugs	<input type="checkbox"/> 4	<input type="checkbox"/> 4
<b>2. Personal history of substance abuse</b>		
Alcohol	<input type="checkbox"/> 3	<input type="checkbox"/> 3
Illegal drugs	<input type="checkbox"/> 4	<input type="checkbox"/> 4
Prescription drugs	<input type="checkbox"/> 5	<input type="checkbox"/> 5
<b>3. Age (mark if between 16-45 yrs)</b>	<input type="checkbox"/> 1	<input type="checkbox"/> 1
<b>4. History of preadolescent sexual abuse</b>	<input type="checkbox"/> 3	<input type="checkbox"/> 0
<b>5. Psychological disease</b>		
ADO, OCD, bipolar, schizophrenia	<input type="checkbox"/> 2	<input type="checkbox"/> 2
Depression	<input type="checkbox"/> 1	<input type="checkbox"/> 1
<b>Scoring totals</b>	_____	_____

Webster & Webster. *Pain Med.* 2005;6:432.

# Screening for Depression

## PHQ2

Over the *last 2 weeks*, how often have you been bothered by any of the following problems?

1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless

- **Positive if  $\geq 3$  points** ➤ **If positive, administer PHQ9**
  - Test Sensitivity: 83%
  - Test Specificity: 92%

**Assess for other Mental Illness** (anxiety, PTSD, personality disorders, suicidality)

Kroenke K, Spitzer RL, Williams JB. *Med Care*. 2003;41(11):1284-92.



25

# Medication Agreements

- Informed consent (goals and risks)
- Plan of care
  - Goals of therapy
  - Follow-up and monitoring plan
  - How opioids will be prescribed and refilled
- Signed by both patient and prescriber
- Serves as a patient counseling document and delineates expectations
- Documents plan of care for other clinicians



26

## Initiation and Titration of Opioids

- View initial course of opioids as a short-term, therapeutic trial
  - The decision to proceed (or continue) with LOT should be a conscious one
  - If opioids are used, should be part of a multimodal strategy
- Start at low doses and titrate cautiously
- Do not initiate therapy with long-acting opioid
  - Insufficient evidence to recommend that all patients be transitioned to round-the-clock, long-acting opioids
- Methadone and fentanyl not recommended as first line options
  - Less predictable and more complicated dosing and pharmacokinetics
  - Buprenorphine in higher risk patients; theoretically lower respiratory risk



27

## Methadone

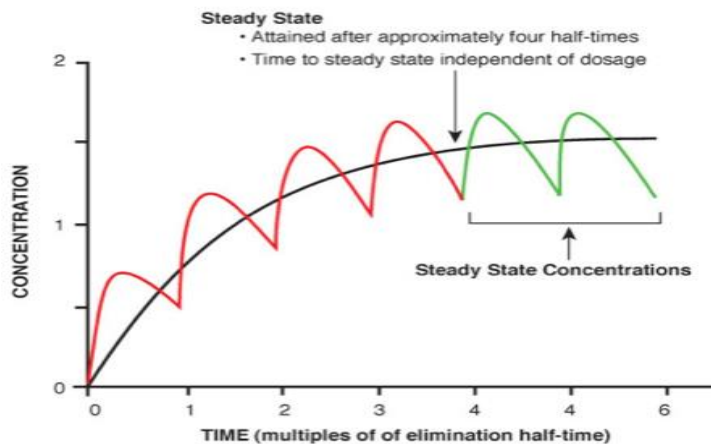
- Synthetic opioid used for treatment of addiction and pain
- Increased methadone deaths nationwide
  - 1999: 800 deaths→2008: 4900 deaths
  - 1.7% of opioid rx's in 2009 and 9.0% of MEDs in 2010<sup>a</sup>
  - Involved in 31% of opioid-related deaths, and 40% of single-drug deaths<sup>a</sup>
- Half-life 15 to 60 hours, up to 120 hours
  - 60 hour half-life=12 days to steady-state
- Associated with QTc interval prolongation and torsades
  - ECG monitoring at baseline and at higher doses<sup>b</sup>

<sup>a</sup>MMWR 2012;61:493-7  
<sup>b</sup>Chou R J Pain 2014;15:321-37



28

## Time to Reach Steady State



[http://www.rxkinetics.com/pktutorial/1\\_6.html](http://www.rxkinetics.com/pktutorial/1_6.html)



29

## Prolonged QTc and Torsades de Pointes

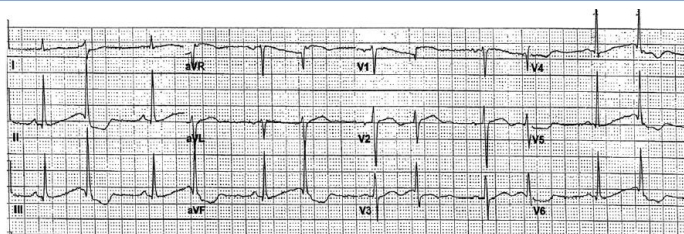


Figure 1 – Admitting ECG shows normal sinus rhythm with atrial bigeminy, nonspecific T-wave abnormality, and QTc prolongation (626 msec).

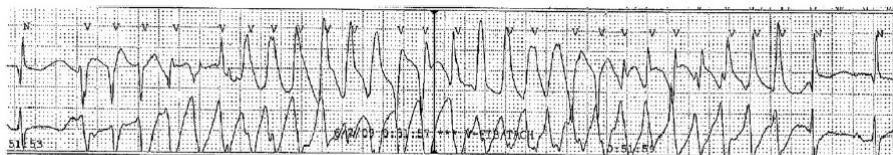


Figure 2 – Rhythm strip shows TdP.



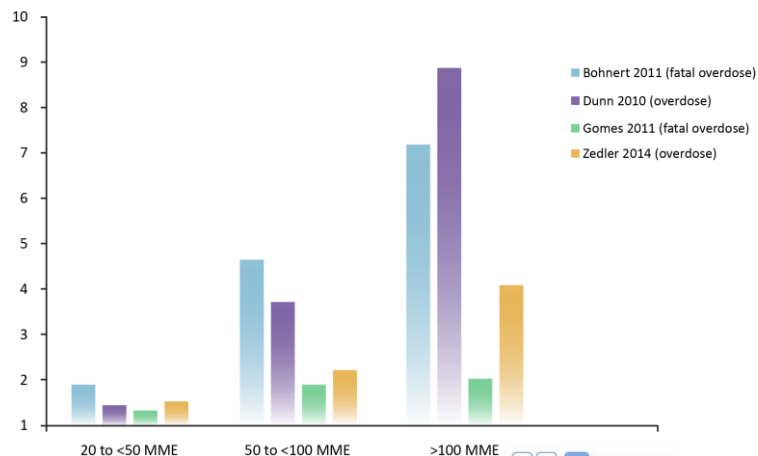
30

## Overdose: Dose-response Relationship

- Observational studies consistently show an association between opioid dose and risk of overdose or death in patients with chronic pain
- Risk starts to increase at relatively low doses and continues to increase
- Studies matched or adjusted for potential confounders available in administrative databases

## Prescribed opioid dose (MME) and risk of overdose

Odds Ratio or Hazard Ratio for Overdose Relative to 1 to <20 MME





## Dosing

- No theoretical ceiling with opioids
  - Benefits of higher doses unclear, ?opioid non-responders
  - Titration to achieve pain relief inconsistent with evidence on benefits
  - Dose-related risk of overdose
- Dose thresholds
  - 2016 CDC guideline: “Caution” at doses >50 MED/day and “avoid” doses >90 MED/day
  - Average dose in overdoses 98 MED/day
  - ~50% of overdoses in patients on <60 MED/day
  - If higher doses, used, need for more frequent or intense monitoring and additional risk mitigation strategies

## Monitoring Outcomes

- Evaluate patients in multiple domains
  - Focus away from pain as the main goal of treatment
    - No therapy for chronic pain is effective in completely relieving pain
    - Patients can report improvement in pain with no improvement in function
  - Measure function and set functional goals
    - Achievable, measurable
  - Screen for psychological comorbidities
  - Assess sleep issues
  - Screen for substance abuse

## PEG Scale

**1. What number best describes your pain on average in the past week:**

0	1	2	3	4	5	6	7	8	9	10
No pain					Pain as bad as you can imagine					

**2. What number best describes how, during the past week, pain has interfered with your enjoyment of life?**

0	1	2	3	4	5	6	7	8	9	10
Does not interfere					Completely interferes					

**3. What number best describes how, during the past week, pain has interfered with your general activity?**

0	1	2	3	4	5	6	7	8	9	10
Does not interfere					Completely interferes					

Krebs EE, et al. J Gen Intern Med. 2009



35

## Urine Drug Tests

- Provides objective information regarding:
  - Self-report unreliable and behavioral observations detect only some problems
  - Evidence of adherence to opioid plan of care
  - Evidence of use or non-use of illicit substances or unprescribed medications
  - May improve adherence
- Perform at baseline and periodically
  - 1-2 times/year for low-risk patients; 3-4 times/year for higher risk
  - Random, scheduled, and /or when concerns arise
  - Discuss expected findings with patient prior to testing
  - Consult with toxicologist/clinical pathologist before acting if patient disputes findings
    - Screening tests requires confirmation
  - Dedicated deceivers can beat the system



36

## Prescription Drug Monitoring Programs

- Available now in almost all states
- Use of PDMPs can identify cases of diversion and doctor shopping
- Use of PDMPs variable and generally suboptimal
- PDMPs vary in who can access, information not available across states
- >20 states mandate use before writing for controlled substances (as of June 2014)

## Avoid Opioids and Benzo's

- Concomitant benzodiazepine use associated with markedly increased risk of opioid overdose
  - Other medications with respiratory depressant effects may also be associated with similar risks
- Taper benzodiazepines gradually
- Offer evidence-based psychotherapies for anxiety
  - cognitive behavioral therapy
  - anti-depressants approved for anxiety
  - other non-benzodiazepine medications approved for anxiety
- Coordinate care with mental health professionals

# Naloxone

- Opioid antagonist that can rapidly reverse opioid overdose; most overdose episodes are witnessed
  - Highly effective in addiction settings
  - Some evidence of effectiveness in chronic pain settings
- CDC recommends for all patients on  $\geq 50$  MED/day, or other risk factors for overdose
  - Consider for all patients prescribed opioids
- Available in FDA-approved IM and IN formulations, also used off-label

<sup>a</sup>Cicero et al. NEJM 2012



39

# Opioid-deterrent Formulations

- Opioid-deterrent formulations recently approved by FDA or undergoing FDA approval process
  - Designed to be tamper-resistant or co-formulated with medications that reverse opioid effects or produce noxious side effects when tampered with
  - Effectiveness for reducing misuse/substance abuse and improving clinical outcomes unproven
  - Likely to be primarily effective in patients who crush or inject opioids
  - Some patients may seek other prescription or illicit opioids<sup>a</sup>

<sup>a</sup>Cicero et al. NEJM 2012



40

## Evaluation of Aberrant Drug-related Behaviors

- Always evaluate aberrant drug-related behaviors
  - Behaviors vary in seriousness
  - Need to judge seriousness, the cause or causes, likelihood of recurrence, and clinical context
    - Predictors of high likelihood of future aberrant behaviors include 3 or more episodes of aberrant behaviors and sense of “losing control”
    - Serious behaviors include diversion, injecting oral drugs
  - Responses range from patient education and enhanced monitoring to referral to addiction specialist and discontinuation of therapy

## Discontinuation of Opioid Therapy

- Taper or wean patients off of LOT when they:
  - Engage in serious or repeated aberrant drug-related behaviors or drug abuse/diversion
  - Experience no progress towards meeting therapeutic goals
  - Experience intolerable adverse effects
- Continue to manage pain off opioids
- Have an exit strategy when initiating a trial of LOT
  - Indications for stopping LOT
  - Plans for tapering or discontinuing
    - Reduction in daily dose of 10% per week reasonable starting point
  - Some patients may require slower tapers
  - Know resources for managing addiction and mental health issues

## Patients Already On High Doses

- For established patients on  $\geq 90$  MME/day who meet criteria for taper, initiate taper!
- For patients who do not meet criteria for taper
  - Discuss recent evidence regarding dose-dependent overdose risk
  - Re-evaluate continued use of high opioid dosages
  - Offer opportunity to taper
- Collaborate with the patient on a tapering plan

## Opioid Use Disorder

- DSM-5: "A problematic pattern of opioid use leading to clinically significant impairment or distress"
- 2014: 1.9 million Americans with OUD due to prescription drugs, ~600,000 due to heroin
- OUD: Decreased quality of life, negative impacts on morbidity and mortality
- Treatment
  - FDA-approved medications: agonist (methadone), partial agonist (buprenorphine), antagonist (naltrexone)
  - Block euphoric, sedating effect, decrease craving, mitigate withdrawal
  - Decrease illicit use and misuse of medication, improves social functioning
  - Decrease criminal activity, risks associated with injection drug use

<http://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.pdf>  
<http://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>

## DSM-V Criteria for OUD

- ✓ \*Tolerance
- ✓ \*Withdrawal
- ✓ **Use in larger amounts or duration than intended**
- ✓ **Persistent desire to cut down**
- ✓ Giving up interests to use opioids
- ✓ **Great deal of time spent obtaining, using, or recovering from opioids**
- ✓ Craving or strong desire to use opioids
- ✓ Recurrent use resulting in failure to fulfill major role obligations
- ✓ **Recurrent use in hazardous situations**
- ✓ Continued use despite social or interpersonal problems caused or exacerbated by opioids
- ✓ **Continued use despite physical or psychological problems**

\*This criterion is not considered to be met for those individuals taking opioids solely under appropriate medical supervision

Mild OUD: 2-3 Criteria  
 Moderate OUD: 4-5 Criteria  
 Severe OUD:  $\geq 6$  Criteria

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.)



45

## Suspected Opioid Use Disorder

- Discuss with your patient and provide an opportunity to disclose concerns.
- Assess for OUD using DSM-5 criteria. If present, offer or arrange MAT.
  - Buprenorphine through an office-based buprenorphine treatment provider or an opioid treatment program specialist
  - Methadone maintenance therapy from an opioid treatment program specialist
  - Oral or long-acting injectable formulations of naltrexone (for highly motivated non-pregnant adults)
- Consider obtaining a waiver to prescribe buprenorphine for OUD (see <http://www.samhsa.gov/medication-assisted-treatment/buprenorphine-waiver-management>)



46

## Opioids for Chronic Pain

- Opioids moderately more effective than placebo for short-term pain relief
  - Effects average 20-30% improvement in pain, 1-2 points vs. placebo
- Data on long-term effectiveness limited
  - Until recently, no placebo-controlled trials >6 months, most trials <8 weeks
  - Uncontrolled studies indicate many discontinuations due to adverse effects (23%) or insufficient pain relief (10%), some patients who continued on opioids experienced long-term pain relief
- Effects on function generally smaller than effects on pain, some trials showed no or minimal benefits
- Optimal results—trials excluded patients at high risk for abuse/misuse, psychological or serious medical comorbidities
- Limited evidence on commonly treated conditions
  - Fibromyalgia, headache, others

Furlan et al. Pain Res Manag 2011  
Noble et al. Cochrane Database Syst Rev 2010



47

## SPACE Trial

### RCT of opioid therapy vs. non-opioid therapy for chronic LBP and OA pain (2017)

- One year VA trial in primary care, n=240
- Open-label for patients and clinicians, assessment masked
- All patients received individualized medication management using collaborative telecare pain management model
- Opioid daily dose limited to 100 mg MED/day
  - At 12 mos: 12% 105-120 mg/day, 23% 75-105 mg/day, 43% 25-75 mg/day, 21% 0-25 mg/day
- At 12 mos, no difference in function; pain worse in opioid group
- Clinically significant improvement: BPI int 59% vs. 61%; BPI severity 41% vs. 54% (p=0.007)
- Opioids associated with more adverse symptoms; no deaths or OUD

Krebs E. Presented at SGIM Annual Meeting, April 2017

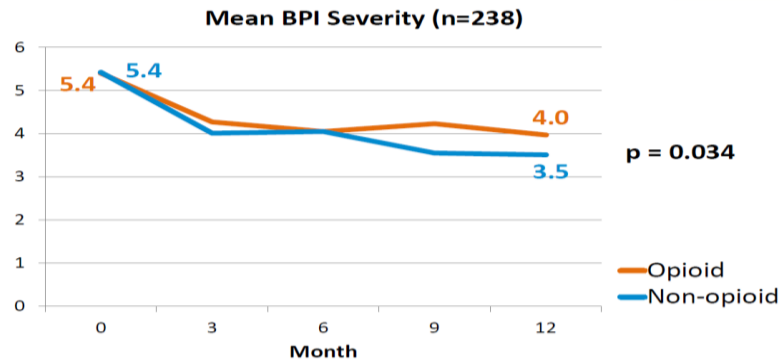


48



# SPACE Trial

## Pain intensity



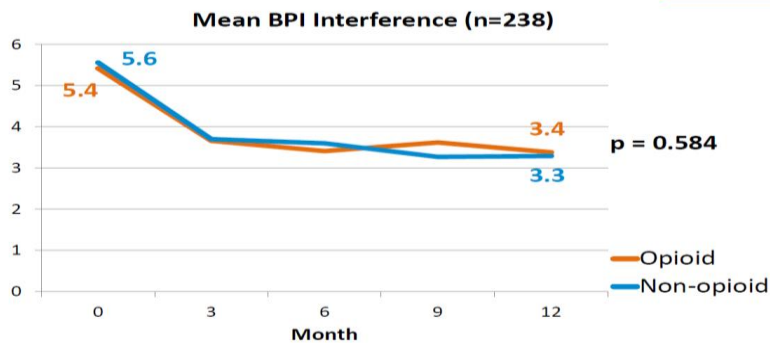
Krebs E. Presented at SGIM Annual Meeting, April 2017



49

# SPACE Trial

## Pain interference with function



Krebs E. Presented at SGIM Annual Meeting, April 2017



50

## 2016 CDC Guidelines

### Recommendation #1

- Nonpharmacologic therapy and nonopioid pharmacologic therapy are preferred for chronic pain.
- Consider opioid therapy only if expected benefits are anticipated to outweigh risks to the patient.
- If opioids are used, combine with appropriate nonpharmacologic therapy and nonopioid pharmacologic therapy.

Dowell D. JAMA 2016;315:1624-45



51

## Approach to Treatment of Pain

- Acute pain
  - Avoid prescribed bed rest, early return to activity as able, heat/cold, OTC analgesics
  - Identify and address psychosocial risk factors early to help prevent transition to chronic pain
- Chronic pain
  - Focus on functional goals and improvement, not just pain
  - Self-care (coping skills, relaxation/meditation, activity/exercise)
  - Identify and address psychosocial contributors to pain
    - Depression, anxiety, PTSD
    - Sleep issues



52

## Non-Opioid Therapies for Pain

- A number of non-opioid therapies are similarly or more effective than opioids, and safer
  - Opioids ≠ effective/good pain management
- Prioritize active over passive modalities
  - Biopsychosocial understanding of chronic pain
  - Active therapies: Psychological treatments, exercise, interdisciplinary rehabilitation, mind-body interventions
    - Actively engage patients with focus on improving function
  - Passive therapies: Medications, physical modalities, complementary and alternative treatments, interventional treatments
    - Main focus is symptom relief
    - Use as an adjunct or bridge to active therapies
- Costs, availability, patient adherence



53

## Cognitive Behavioral Therapy (CBT)

- Psychological therapy that integrates:
  - Cognitive therapy
    - Restructures maladaptive thinking patterns
  - Behavioral therapy
    - Replace undesirable with healthier behaviors
- Effective for improving pain, disability, mood, maladaptive behaviors
  - Some effects appear sustained
  - ?More effective in persons with psychosocial risk factors

Williams AC et al. Cochrane Database Syst Rev 2012:CD007407  
 Henschke N et al. Cochrane Database Syst Rev 2010:CD002014  
 Hill JC et al. Lancet 2011;378:1560-71



54

## Meditation/Relaxation

- Helpful technique for self-management and coping
  - Incorporates some CBT principles
- Distraction, reduce anxiety, reduce sympathetic arousal, reduce muscle tension, altered central processing
- Evidence on effectiveness increasing
  - Mindfulness-based Stress Reduction similarly effective to CBT
- Varied techniques
  - Meditation
  - Progressive muscle relaxation
  - Hypnosis
  - Guided imagery
  - Yoga, Tai Chi—movement-based therapies that incorporate meditation or relaxation principles
  - Related: Biofeedback

Chiesa A et al. J Altern Complement Med 2011;17:83-93  
Cherkin DC et al. JAMA 2016;315:1240-9



55

## Exercise

- Effects on pain and function (and general health!)
  - Impact on fear avoidance behaviors (hurt does not equal harm)
- Many different types of exercise
  - Aerobic, strengthening, aerobic, stretching, mixed
  - McKenzie, motor control and stabilization, active trunk exercise, others
  - Supervised vs. home, group vs. individual
  - Related: Alexander technique, Pilates, yoga, Tai Chi, others
- Ideally done within a CBT-informed framework
- No technique clearly superior
  - Supervised, individualized exercise programs more effective initially?
  - Handouts and videos for home exercise
  - Start slow, incremental increases; goal is sustained engagement

Hayden JA. Ann Intern Med 2005;142:765-775  
Hayden JA. Ann Intern Med 2005;142:776-85  
Steffens D, et al. JAMA Intern Med.2016;176(2):199-208



56

## Interdisciplinary Rehabilitation

- Combines at a minimum psychological treatments and exercise
  - Provided by professionals from at least two different specialties
  - Focus on improvement in function
- Components and intensity of interdisciplinary rehabilitation vary
  - Less intensive programs may be as effective as highly intensive (>20 hours/week) programs
- More effective than non-interdisciplinary rehab, some evidence of sustained effects
- Lack of availability and reimbursement important barriers
  - May be most effective in persons who fail standard therapies, severe functional deficits, severe psychosocial risk factors

Kamper SJ. Cochrane Database Syst Rev 2014;CD000963  
Gatchel RJ. J Pain 2006;7:779-93



57

## Passive Therapies

- Physical modalities: Evidence limited and difficult to show consistent or sustained benefits
  - Heat similarly effective to NSAIDs for acute LBP
  - Other modalities not generally recommended
- Manipulation, acupuncture, massage: Some evidence of benefit for certain pain conditions
  - Some effects likely non-specific and related to “hand-on” nature
  - If used, as adjunct to active therapies
  - Be aware of costs and discontinue if ineffective in initial trial
  - Expectations of benefit can predict effectiveness
  - Enhanced access to CAM through ACA



58

## Medications

- Acetaminophen and NSAIDs first-line therapies for many conditions; benefits modest
- Tramadol and tapentadol: Dual mode of action (opioid receptor and centrally acting); tramadol schedule IV and tapentadol schedule II
- Gabapentin and pregabalin: First line for neuropathic pain (pregabalin schedule V); off-label for non-neuropathic pain
- Antidepressants: SNRI's first line for neuropathic pain; TCA's with anticholinergic and cardiac AE's
  - Duloxetine approved for fibromyalgia and chronic back pain
- Skeletal muscle relaxants: Sedating, short-term use for acute pain
  - Cyclobenzaprine (similar to TCA) and tizanidine (similar to clonidine) best-studied
- Benzodiazepines: Avoid!
- Topical lidocaine for neuropathic pain, topical NSAIDs for localized OA

## Conclusions

- Very limited data on long-term benefits of opioid therapy, with some evidence showing no benefits versus non-opioid therapy
- Accumulating evidence on serious harms of long-term opioid therapy that appear to be dose-dependent
- Benefits appear limited and harms are significant, suggesting a close balance of benefits to harm
- A more cautious approach to use of opioids for pain is indicated
- Universal precautions, including risk assessment, patient selection, monitoring, and risk mitigation strategies
- Non-opioid therapies preferred, with attention to psychosocial contributors to pain
- Assess for and management of opioid use disorder

# PCSS-O Colleague Support Program and Listserv

- PCSS-O Colleague Support Program is designed to offer general information to health professionals seeking guidance in their clinical practice in prescribing opioid medications.
- PCSS-O Mentors comprise a national network of trained providers with expertise in **addiction medicine/psychiatry and pain management**.
- Our mentoring approach allows every mentor/mentee relationship to be unique and catered to the specific needs of both parties.
- The mentoring program is available at no cost to providers.

**For more information on requesting or becoming a mentor visit:**

**[www.pcss-o.org/colleague-support](http://www.pcss-o.org/colleague-support)**

- **Listserv:** A resource that provides an "Expert of the Month" who will answer questions about educational content that has been presented through PCSS-O project. To join email: [pcss-o@aaap.org](mailto:pcss-o@aaap.org).



61



**PCSS-O** is a collaborative effort led by American Academy of Addiction Psychiatry (AAAP) in partnership with: Addiction Technology Transfer Center (ATTC), American Academy of Neurology (AAN), American Academy of Pain Medicine (AAPM), American Academy of Pediatrics (AAP), American College of Physicians (ACP), American Dental Association (ADA), American Medical Association (AMA), American Osteopathic Academy of Addiction Medicine (AOAAM), American Psychiatric Association (APA), American Society for Pain Management Nursing (ASPMN), International Nurses Society on Addictions (IntNSA), and Southeast Consortium for Substance Abuse Training (SECSAT).

For more information visit: [www.pcss-o.org](http://www.pcss-o.org)

For questions email: [pcss-o@aaap.org](mailto:pcss-o@aaap.org)



Twitter: [@PCSSProjects](https://twitter.com/PCSSProjects)

Funding for this initiative was made possible (in part) by Providers' Clinical Support System for Opioid Therapies (grant no. 5H79TI025595) from SAMHSA. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

# Questions?



[integration.samhsa.gov](http://integration.samhsa.gov)

## CONTACT INFORMATION

Aaron M. Williams, MA  
[aaronw@thenationalcouncil.org](mailto:aaronw@thenationalcouncil.org)  
202-684-7457 x 247



[integration.samhsa.gov](http://integration.samhsa.gov)